DOCUMENT RESUME

ED 423 968 PS 026 084

TITLE	North Carolina's Smart Start Initiative: 1994-95 Annual Evaluation Report.
INSTITUTION	North Carolina Univ., Chapel Hill. Frank Porter Graham Center.
PUB DATE	1995-06-00
NOTE	26p.; Report to the Department of Human Resources by the Smart Start Evaluation Team.
PUB TYPE	Reports - Evaluative (142)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Change Agents; *Day Care; *Early Childhood Education; *Family Programs; *Health Services; *Integrated Services; Partnerships in Education; Program Evaluation; State Programs; Young Children
IDENTIFIERS	Day Care Quality; Family Resource and Support Programs; Family Support; North Carolina; Resource and Referral Service; *Smart Start NC

ABSTRACT

Smart Start is North Carolina's partnership between state government and local leaders, service providers, and families to better serve children under six years and their families to ensure that all children start school healthy and prepared to succeed. Local Smart Start partnerships spent much of their first year formulating long-term plans, focusing on evaluation, early childhood education and care, family support services, health services, and innovative service delivery and system change. The major findings from Year 1 include: (1) local decision-making efforts have been hampered by the state's plan approval mechanisms, budgetary deadlines, and statewide standards; (2) local partnerships focused on areas most appropriate for their community, early childhood education, family support, collaboration, or service systems change; (3) local planning is critical to program success; (4) contracting problems need to be solved; (5) counties need content-specific technical assistance in addition to the process-oriented assistance provided by the state; and (6) involving parents in decision-making was difficult. Most local partnerships began implementation in 1994. To date, significant changes were evident in the following areas: the percentage of AA-licensed child care facilities, enhanced quality of care and number of services offered in child care centers receiving Smart Start services, professional development of child care staff, the provision of Child Care Resource and Referral services, the provision of family support through Family Resource Centers, and increased subsidies to children of low-income families. (KB)

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NORTH CAROLINA'S SMART START INITIATIVE: 1994-95 ANNUAL EVALUATION REPORT

Report to the Department of Human Resources

by the Smart Start Evaluation Team

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June, 1995

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We want to thank all child care directors and providers, service agency staff, and other Smart Start participants who have helped with various aspects of the evaluation.

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North Carolina's Smart Start Initiative: 1994-1995 Annual Evaluation Report
Summary

Local Smart Start partnerships spent much of their first year (1993-94) in an intensive, comprehensive process of formulating their long-term plans to improve the lives of young children and their families. The formative evaluation of Smart Start focused on understanding this process in order to determine the strengths and weaknesses of the process as well as define a context in which to better understand partnerships' implementations of their plans. The following points summarize the major findings of our evaluation of the first year process:

- The hallmark of Smart Start has been its emphasis on local decision-making power, but the State has increasingly limited the degree of local autonomy through plan approval mechanisms, budgetary deadlines, and state-wide standards. Local partnerships intended to restructure local services from the bottom-up but have encountered significant obstacles directed from the top-down.

- The focus of Smart Start has been very broad--covering early childhood education, family support, collaboration, and service systems change. With such breadth, local partnerships could not focus equally on all areas and, essentially, selected specific areas that were most appropriate for their community. This intentional diversity across counties may be narrowed considerably if local autonomy in program decision making is restrained by more State mandates.

- Local planning is critical to Smart Start's success. The first 12 pioneer partnerships needed more time to develop their long-term plans. Long-term planning involved bringing together a diverse group of community members to define the strengths and needs of their community, create a vision, select goals, and formulate strategies for reaching those goals. This long-term planning process was much more difficult when partnerships were forced to make immediate decisions at the same time.

- Problems with the contracting system need to be solved. The first year efforts of the 12 pioneer partnerships were funded through 245 separate contracts. Although the contract approval time has shortened, the numerous steps in the contract approval process have not decreased significantly and continue to delay partnerships' efforts.

- The State provided technical assistance, through the County Collaboration project, for the *process* of working together to develop a plan. The County Collaboration process helped improve local partnership's team functioning, and its meetings provided productive work sessions for partnerships. However, the State did not provide adequate *content-specific* technical assistance to the partnerships. Local partnerships needed more technical assistance regarding the content of their plans and strategies (e.g., which family support programs are most effective).

- Involving parents in the decision-making process was difficult for all pioneer partnerships and requires continuing thought, attention, and action by both the State and local partnerships.

Most local partnerships began implementing their plans in the spring and summer of 1994. Many partnership initiatives were designed to improve the quality of child care and provide additional family support services because these strategies have been shown to help children's development. To date, significant changes are evident in the following areas:

- Between 1993 and 1995, the percentage of AA-licensed child care facilities has increased much more in the pioneer Smart Start counties (25%) than in the non-Smart Start counties (17%). AA-licensed facilities generally have better staff:child ratios, smaller group sizes, and more educational materials than A-licensed facilities.

- Based on 193 child care visits, child care centers that received more Smart Start services were observed to provide higher quality care than centers that received fewer or no Smart Start services.

- Child care centers that were participating in Smart Start efforts were more likely to have staff participating in T.E.A.C.H. (Teacher Education and Compensation Helps), a program designed to improve the education and compensation of child care teachers, compared to other randomly selected child care centers from the county/region.

- Child care centers that were participating in Smart Start were more likely to offer children meals, speech and language screenings, developmental screenings, and dental screenings than other randomly selected child care centers from the county/region.

- Currently, all 12 pioneer Smart Start counties/region provide Child Care Resource and Referral services to help families search for appropriate child care arrangements that meet their individual needs, whereas only 4 of the pioneer counties provided these services in 1993, prior to Smart Start.

- Ten of the 12 pioneer Smart Start counties/region now have Family Resource Centers that support families by offering multiple services, support, information, and referral in a centralized location. In 1993 prior to Smart Start, Family Resource Centers existed in only 3 of the pioneer counties.

- Pioneer Smart Start counties effectively provided more child care through subsidies to children of low-income families. Pioneer Smart Start counties *reduced* the number of children on the child care subsidy waiting list by 42% from 1993 to 1994, compared to a 36% *increase* of children on the waiting list in non-pioneer Smart Start counties during the same time period.

New, expanded, and improved programs in the child care, health, and family service systems have been implemented by the partnerships to enhance outcomes for children and families. After only a year, early childhood and family support services in the pioneer counties have improved in some ways, as described above. Continued improvement in these and other areas (e.g., child care teacher training, staff:child ratios, family involvement) will be necessary to effect children and families' lives significantly. Baseline data on children's health status, the quality of early childhood education and care, family support, and service systems change have been gathered by the evaluation team and will be collected and monitored annually in the future to determine the long-term effectiveness of Smart Start.

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North Carolina's Smart Start Initiative:

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Smart Start is North Carolina's partnership between state government and local leaders, service providers, and families to better serve children under 6 and their families. Smart Start's innovative approach requires that local community partnerships plan how best to meet their own community's needs, improve and expand previous programs for children and families, and design and implement new programs. In the fall of 1993 Smart Start established local partnerships in 12 geographically and economically diverse areas across the state. Eleven of the partnerships encompassed individual counties and one was a seven-county cooperative effort.

Following an intensive planning effort, these 12 partnerships were authorized to allocate from $355,000 to $2,334,000 for child and family services in 1993-94, with the amount partially determined by the number of county children under 6 living in poverty. In 1994-95 amounts ranged from $432,000 to $4,800,000 per site. Smart Start partnerships have put in place a wide variety of activities to ensure that children are healthy and prepared to succeed when they enter school; that high quality, affordable early childhood education is available for every child who needs it; and that families are supported in their role as primary providers for their children.

The evaluation of Smart Start is being conducted by faculty and staff at the University of North Carolina at Chapel Hill--researchers from the Frank Porter Graham Child Development Center and the Schools of Education, Public Health, and Social Work. In the first year of Smart Start, the evaluation team met regularly with staff from Department of Human Resources (DHR) and Division of Child Development (DCD) and with local partnership teams to determine the extent and type of evaluation that would be needed. We produced a comprehensive set of indicators for the potential use by all counties in their local evaluations and documented the first-year process of implementing Smart Start in a report, "Emerging Themes and Lessons Learned."

In the first year of Smart Start, evaluation team members also began collecting data from existing datasets in the child care, health, and family services areas. Whenever possible, we had hoped to use existing datasets, particularly those that are centralized in Raleigh on a county-by-county level, to monitor specific outcomes in the few years before Smart Start implementation and in each subsequent year of program implementation. This strategy would allow for

investigation of changes over time in Smart Start counties and comparison of participating and non-participating counties. However, we discovered severe limitations of most of these databases, including datasets collected on subsamples of children or families rather than all children or families; datasets collected by region rather than by county; datasets aggregated across wide age spans rather than by separate ages; and datasets collected by service counts rather than by counts of unique users. Therefore, most questions about Smart Start's effectiveness must be answered by new data collection procedures developed by the evaluation team.

Smart Start is a complex set of interventions, somewhat different in each county. Even within a county or region, Smart Start is not *a* program but rather *several* programs and projects. Some projects have well-defined participant lists, but others do not. Many Smart Start "participants" are not aware that they are receiving Smart Start supported services. For instance, a family may participate in activities at the local Family Resource Center and not even know that some of the services are funded by Smart Start. An evaluation of the overall Smart Start program must be broad and comprehensive.

In September, 1994, we completed a comprehensive evaluation plan that includes a variety of different data collection activities intended to capture the breadth of programs being implemented across the counties and the extent of possible changes that might result from Smart Start efforts (see Table 1 for a summary of the evaluation plan). This plan was circulated to and discussed with six of the local partnerships, DHR and DCD Smart Start core team members, the Legislative Oversight Committee, the North Carolina Partnership for Children, and three national early childhood and family support experts. With endorsement from these groups, the evaluation team has continued to implement the plan.

An evaluation of Smart Start's effectiveness requires long-term data collection. Ensuring that all children are healthy and prepared to succeed when they enter school, which is the primary goal of Smart Start, can be most reasonably measured after 5 years, when an entire group of children entering kindergarten would have had access to Smart Start services during their lifetimes. In addition, multiple, long-term, societal factors, such as poverty, affect children's health and preparedness for school. Overcoming these problems requires changes in family supports and service systems, other long-term goals of Smart Start. In sum, North

Table 1: Summary of Smart Start Evaluation Plan:

Goals 1 and 2

Goal	Expected Outcome	Measurement Tool	Source of Data
1. Children are healthy and prepared to succeed in school	more children will be prepared to succeed when they enter school	Kindergarten Teacher Checklist	kindergarten teachers
		FirstSTEP Screening Test	kindergarten children
		local preschool screening measures	public school records
	fewer children will be retained in the early school grades	existing database	SIMS database from NC DPI
	fewer kindergartners will be identified for the first time as having special needs	existing database	SIMS database from NC DPI
	higher scores on end-of- year test in 3rd grade	existing database	SIMS database from NC DPI
	more kindergartners will be healthy when they enter school	Kindergarten Health Assessment	public school records
	health status of young children (b-5) will improve	existing databases	state-level health agencies (e.g., Medicaid, Health Services Information System)
		family interview	families who use child care; families who use community services; families who participate in Smart Start efforts
2. Families effectively fulfill their role as primary providers, nurturers, and teachers	families value learning by participating in educational activities with their children, families have access to the support services they need and want, families act as role models through their involvement in the community, and families feel empowered	family interview	families who use child care; families who use community services; families who participate in Smart Start efforts

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Table 1: Summary of Smart Start Evaluation Plan:
Goals 3 and 4

Goal	Expected Outcome	Measurement Tool	Source of Data
3. High quality, affordable services for children and families	quality of child care will improve for all children, including those with special needs	Early Childhood Environment Rating Scale, Infant/Toddler Environment Rating Scale, Family Daycare Rating Scale	classroom observations of selected child care centers and family daycare homes
	regulatable aspects of child care will improve	Child Care Director Interview and Family Daycare Home Provider Interview; Child Care Worksheets from Needs & Resources Assessment	child care center directors and family daycare providers
	more child care providers will be well-trained	Self-Assessment of Skills and Training Needs for Early Childhood Professionals	child care providers in child care centers and family daycare homes
	more children with special needs will be served in inclusive settings	Child Care Director Interview	child care center directors
		existing database	Part H and SIMS (Part B) databases
	service coordination for children with special needs will improve	focus groups	parents of children with disabilities and professionals who serve children with special needs
	more families of children with special needs will participate in and be satisfied with early intervention services	family survey	families of children with disabilities who are receiving early intervention services
	community services will be more readily available, affordable, and of high quality	family interview	families who use child care; families who use community services; families who participate in Smart Start efforts
4. NC counties value children and families by providing options, resources, and encouraging collaboration	inter-agency coordination and collaboration will improve over time	Network Analysis Survey	agency administrators and service providers
	more services will be available, affordable, and of higher quality	family interview	families who use community services and child care
	number of agencies that have parents on their advisory boards will increase	agency survey; Child Care Center Director Interview	agency administrators; child care center directors

Carolina cannot expect Smart Start to demonstrate major effects within a brief time span of a year or two. However, information collected during these first few years will establish a baseline from which to compare changes and can provide data regarding the direction of changes that may be emerging. Information from the first years of Smart Start is provided in this report.

At the present time (May, 1995), some of the initial datasets are complete, but many others are in the process of being collected and will continue to be collected annually. To answer questions posed in this report, only verified data have been used. For example, 193 classrooms in child care centers have been observed and data from 169 of these visits are on file, checked, verified, and usable in data analyses at this time. For each type of data, this report will indicate what portion are being used in these preliminary analyses. When not enough data are available, we indicate that no conclusions can yet be drawn. *These points bear repetition: this is an interim report using only data that have been verified to date, and any conclusions reached are tentative, subject to reanalysis with a complete dataset.* This report does, however, serve as a blueprint of the types of data that will become available as data collection proceeds and the kinds of questions about Smart Start that can be answered.

The report is organized in five major areas:

- first year planning
- early childhood education and care
- family support services
- health services
- innovative service delivery/systems change

Each section begins with a brief summary of why the topic is included in the evaluation and addresses several questions within each area. For each question, the methods for data collection, analyses, results, and interpretation are provided.

FIRST YEAR PLANNING

A fundamental tenet of Smart Start is that local problems are best solved with local solutions. Partnerships spent a large portion of the first year discussing local needs and resources, developing goals, planning strategies, and beginning to implement activities. To assist partnerships with these tasks, the County Collaboration process was designed to ensure that partnerships build true collaborations that result in decisions made by a broad cross-section of community members. Each partnership created its own vision and plans, then supported many different projects.

1. Was the County Collaboration helpful to Smart Start partnerships, and if so, in what ways?

The County Collaboration improved team functioning as perceived by the partnership participants. Teams' self-ratings in the areas of clarity of purpose, internal support, and external support increased positively over time. In other areas of team functioning such as cohesion, communication, and decision-making, initial team scores were quite high, indicating little need for improvement.

Team functioning was measured by the Team Performance Scale (TPS), adapted from the Skills Inventory for Teams (Garland, Frank, Buck, & Seklemian, 1992). The TPS measures 12 aspects of team functioning: clarity of purpose, cohesion, clarity of roles, communication, use of resources, decision making/problem solving, responsibility/ implementation, conflict resolution, view of family role, evaluation, external support, and internal support. Smart Start team members completed the TPS during the County Collaboration meetings in December of 1993, and February and April of 1994. Teams completed this rating a final time in August of 1994, approximately one year after their Smart Start collaboration began.

Each team's mean score on each item was examined over time. Over the four rating occasions, team members rated their team increasingly higher on purpose (e.g., mission), external support (e.g., support for the team from others), and internal support (e.g., procedures within the team that support the team's work). Ratings in the other nine areas of team functioning did not show significant increases, probably because the initial ratings in December of 1993 were already at very high levels and, essentially, could not be improved. This could mean that teams selected to be in the first round of Smart Start were those who had an already-established

collaboration or those who, for whatever reason, cooperated well as a team when they first organized in the fall of 1993.

According to interview data from 55 key Smart Start participants, these increased perceptions in team functioning were partially due to the support and guidance of the County Collaboration process. The majority of respondents thought that the County Collaboration meetings were very productive work sessions because teams were able to focus their attention and work collaboratively to accomplish pressing tasks. The majority of respondents (68%) also viewed the help of their county team facilitator (the "coach") as important in their team-building efforts. Members from local partnerships strongly encourage the County Collaboration process to be maintained, although with some modifications (see the 1995 Smart Start Evaluation Report, "Keeping the Vision in Front of You: Results from Smart Start Key Participant Interviews").

2. What important lessons were learned during the first year of planning?

Several challenges that emerged during the first year of Smart Start were discussed in our 1994 report, "Emerging Themes and Lessons Learned." Some of the recommendations made in that report are summarized here:

a) The focus of Smart Start, which was originally very broad and not clearly delineated, needed to be clarified. The local partnership leaders, the DHR core team, and the NC Partnership for Children developed a position statement, "Goals for Smart Start." Although each individual goal is clear, there are 39 subgoals in all--far too many for a partnership to address. Essentially, each partnership selected specific subgoals that were most appropriate for their community.

b) Local partnerships needed more time during the first year to formulate long-range plans instead of planning simultaneously for the short-term and long-term. The hallmark of Smart Start is its emphasis on locally developed plans that are responsive to local needs and resources. Bringing local leaders and families together to achieve consensus on a plan, usually a complex, multifaceted plan, required much time and personal effort.

c) Problems with the DHR contract system needed to be solved. The contract problems prevented local partnerships from obtaining funds in a timely fashion, which in turn restricted partnerships' abilities to implement activities during the first year.

d) The State and local partnerships needed to give parent involvement in decision-making more thought, attention, and action. Including nontraditional stakeholders as decision makers was difficult for most partnerships during the first year.

e) Local partnerships needed content-specific technical assistance to help them select or design particular strategies that are most likely to help them reach their goals.

3. What kinds of activities are funded through Smart Start?

Seventy-three percent of Smart Start service allocations have been for early childhood education and care activities, 20% have been for family support (non child care related) services, and 7% have been for health services. Across the pioneer partnerships, proportions of dollars spent in the three areas vary. Within the early childhood education area, local partnerships' allocations range from 55% to 91%. For family support services, allocations range from 6% to 38%; and for health services, 2% to 18%.

All 12 pioneer partnerships have implemented activities in these areas: child care subsidy expansion and enhancement, quality improvement grants to child care facilities, education and training for child care teachers, child care resource and referral services, as well as health visits or screenings. Ten have implemented activities to increase child care availability and have supported Family Resource Centers; 9 have funded transportation services. Several partnerships also began family literacy, parent education, and teen parent support programs. Some unique programs have been developed, including family support services for Hispanic/Guatemalan families, financial and educational support for parents who choose to remain at home to care for their young children, and service coordination for families who are homeless.

Activities and allocations were obtained at the end of the third quarter from the Smart Start quarterly database that was designed by members of the Smart Start evaluation team and DCD staff. Activities were categorized into broad groups based on project descriptions and information from local partnerships. Local partnership administration and local evaluation costs were not included in the proportions above.

4. How many new programs have been implemented because of Smart Start, and how many existing programs have been expanded because of Smart Start?

Approximately half of the projects funded with Smart Start dollars during the 1994-95 fiscal year are new projects created as part of the Smart Start initiative (151 out of 310 projects);

the other half are expansions or enhancements of programs that existed prior to Smart Start (153 out of 310). Six projects are continuations of existing programs, without expansion or enhancements. Smart Start is building on a base of existing community programs with expansion and improvement to some; Smart Start is also creating new programs when necessary. (Refer to question 3 for a description of the database from which this information was obtained).

5. How many staff positions are funded with Smart Start dollars?

This frequently asked question cannot be answered accurately. The Smart Start quarterly reporting system (see question 3 for a description) includes counts of staff funded directly with Smart Start moneys but does not include indirectly hired service delivery staff (e.g., a teacher hired with funds freed up because of Smart Start moneys). At the most recent reporting period, 382 full-and part-time people (264 full-time equivalents) were directly employed by Smart Start, with a wide range reported across counties, even those of similar size. The variability is the result of the kinds of activities funded. For example, one county may directly employ several new teachers to staff Head Start and child care classrooms. Another county may increase the child care subsidy rate per child, with these funds used by child care directors to employ several new teachers. In both counties, new teachers were employed and more children were served, but the funding mechanism--and therefore the reporting system--differed.

6. How many children and families have benefited from Smart Start?

For several reasons, this question cannot be answered accurately. First, most service agencies and programs in North Carolina do not count individual families and children served but instead count service contacts (e.g., number of clinic visits) which overestimate the actual number of clients served. Second, some Smart Start activities are outreach efforts, such as public education through pamphlets, for which lists of families served cannot be produced. Third, North Carolina currently does not use a general database for all children and families served. Thus, people who receive multiple Smart Start services are counted by every different agency or program in which they participate. All of these problems prohibit the accurate calculation of a total number of children and families who have benefited from Smart Start. However, within some specific categories of services, such as the number of children removed from the child care subsidy waiting list, unduplicated counts are possible (refer to question 14 for child care subsidy waiting list information).

QUALITY OF CHILD CARE

Research has indicated that children in higher quality child care demonstrate better cognitive and social skills than children in lower quality child care (Burchinal, Roberts, Nabors, & Bryant, in press; Cost, Quality, & Child Outcomes Study Team, 1995; Whitebook, Howes, & Phillips, 1989). Because of this relationship between quality child care and better child outcomes, and because so many of North Carolina's young children are in child care, all of the partnerships are working to improve the quality of child care as a strategy for ensuring that children are prepared to succeed when they enter school. The evaluation includes measures of many components of child care quality.

7. Are child care centers improving in quality as a result of Smart Start?

In North Carolina an AA-licensed center has better staff:child ratios, smaller group size, greater space per child and more educational materials than does an A-licensed center. The proportion of AA-licensed centers can be considered a marker for quality. Based on child care licensing data from the DCD, the percentage of AA child care facilities increased by 25% between 1993 and 1995 in the pioneer Smart Start counties, as compared to 17% in non-Smart Start counties. The new 1994 ratio and group size requirements that affected all North Carolina child care programs (one of the state-wide elements of Smart Start) may have contributed to the large statewide increase in total numbers of AA facilities in only 2 years (20%). The higher rate of increase (25%) in AA facilities in Smart Start counties may be a result of local initiatives to support child care quality improvements. In fact, half of all the centers in North Carolina that have become AA-licensed since 1993 (62 of 120 AA licensed centers) are in the 18 pioneer Smart Start counties. The evaluation team is collecting observational data in over 175 child care centers that will also help answer this question in future years.

8. What is the relationship between the quality of child care centers and Smart Start involvement?

The extent to which a center is involved with Smart Start efforts and activities is significantly and positively related to the overall quality of care it provides. That is, centers that report receiving more Smart Start services are more likely to provide child care that is observed to be of better quality. The training, quality improvement grants, substitute pools, and all other local efforts funded by Smart Start may well be helping improve the quality of care in these

centers, but this analysis does not prove a cause-effect relationship. It is also possible that the differences in quality may have existed prior to Smart Start, with centers providing higher quality care more interested in participating in Smart Start. Data collected in future years will help clarify this relationship between Smart Start involvement and higher quality of care.

Some center characteristics that are regulated by state licensing requirements are positively associated with quality (Whitebook et al., 1989). For instance, centers that have better staff:child ratios (i.e., more adults per child) and smaller group sizes tend to provide higher quality care. Higher quality has also been associated with better developmental outcomes for children. Staff:child ratios in infant classrooms in child care centers from the nominated sample (i.e., those indicated by the local partnerships as Smart Start participants) were significantly better compared to those in other randomly selected centers (1:3.9 in nominated centers; 1:4.8 in others). No significant differences in infant group size, toddler and preschool staff:child ratios, or toddler and preschool group sizes were evident between nominated and randomly selected centers.

These findings are from director interviews and child care center observations obtained from a sample of child care centers in each pioneer Smart Start site. In three pioneer counties with a small number of child care centers, all centers were asked to participate. In the remaining nine counties, two samples of child care centers were selected. One sample was a random sample of 10 or 20 licensed centers (20 in the larger areas--Cumberland, Mecklenburg, and Region A) selected from the DCD's directory of all licensed centers. This sample is representative of child care in each Smart Start county/region. The second sample consisted of 10 centers in each county/region that were nominated by the local partnership. This sample, known to have participated in the county's Smart Start efforts in one or more ways, is included to study directly Smart Start's effect on center-based child care. Of the 250 centers originally asked to participate, 193 (77%) agreed to be visited.

Center involvement with Smart Start was measured through a question on the director interview. Directors were asked to indicate whether their center or staff had been involved in any of 14 different Smart Start supported activities aimed at improving the quality of child care, including teacher training, use of on-site educational consultants, use of a trained substitute pool, or purchase of new educational materials; each center received a score of 0-14. Every county

offered some, but not necessarily all, of these types of quality-improvement opportunities. Staff:child ratios and group sizes were also obtained through questions on the director interview. Interview data from 129 child care center directors were included in these analyses.

Quality of care was measured through on-site visits of preschool classrooms by trained observers using the Early Childhood Environment Rating Scale (ECERS) (Harms & Clifford, 1980) Observational data from 169 child care centers were included in the analyses. The ECERS consists of 37 questions about the child care environment, activities, and teacher-child interactions. Each is rated on a 1-7 scale. Earlier research has shown that the total score and two factor scores, Appropriate Caregiving and Developmental Appropriateness, are the best measures of overall quality (Whitebook et al., 1989). The Appropriate Caregiving subscale includes items related to child-adult interactions and supervision. The Developmental Appropriateness subscale includes items related to daily schedule and educational materials and activities. Using data from the random sample of child care centers, the total ECERS score and both subscale scores were significantly, positively related to participation in Smart Start.

9. Has the education level of child care providers improved?

Child care providers with higher education levels are more likely to provide higher quality child care than providers with less education (Whitebook et al., 1989). Based on comparisons of data reported by child care directors in all the pioneer Smart Start counties/region from March 1994 to May 1995, the education level of child care providers in Smart Start sites has not improved significantly. However, child care centers in the nominated sample (i.e., those participating in local Smart Start efforts) were more likely to have teachers and directors who participated in the T.E.A.C.H. (Teacher Education and Compensation Helps) program that provides scholarship opportunities to improve the education of child care teachers while increasing their compensation. Increasing educational attainment, as a result of local partnership efforts or the statewide T.E.A.C.H. program, requires a good deal of effort to change and may be manifested over a longer period of time than the one-year period we have obtained. This is an indicator we will monitor each year.

Baseline information on the education level of child care providers was obtained from 364 child care facilities from the pioneer Smart Start counties in March, 1994, through the Needs and Resources Assessment of all 100 counties. In counties with fewer than 60 child care

centers/large homes, all child care centers/large homes were asked to provide data. In counties with more than 60 child care centers/large homes, a random sample of 60 centers/large homes was selected. These data showed that in the 12 pioneer sites, 36% of the providers had a Child Development Associate credential (CDA) or higher, and 17% had a bachelor's degree or higher.

Approximately one year into Smart Start implementation (spring, 1995), we gathered data on providers' education level through interviews with child care directors in each pioneer Smart Start county/region. Data from 129 center directors and their teachers are available for analysis at this time (refer to question 8 for a description of the sample of child care centers).

The teacher education data from the director interviews in the 12 pioneer counties/region showed that 6% of the providers had a CDA or higher, and 9% had a bachelor's degree or higher. Analysis of variance statistical techniques show no significant improvements in teacher educational level from 1994 to 1995 and, in fact, showed a significant decrease in the proportion of providers with a CDA or higher. We suspect that differences in data collection techniques resulted in this anomaly and that a real decrease has not occurred. Each county was responsible for collecting its own data for the Needs and Resources Assessment, while data for the Smart Start evaluation were obtained through in-person director interviews conducted by trained data collectors. With the frequent teacher turnover rate in child care centers, it is also possible that the providers who were included in the 1994 sample were no longer working in child care centers in 1995.

10. Are Smart Start efforts improving child care teachers' competence?

The self-reported training needs and skills/knowledge of child care teachers in nominated centers were not significantly different from that of teachers in randomly selected centers, suggesting that Smart Start has not significantly changed teachers' perceived competence. As with teachers' level of education, changes with respect to professional competencies are likely to require intensive inservice training and may take longer than a year to achieve.

Every child care teacher in the centers we observed was asked to complete the Self-Assessment for Child Care Professionals (Wesley & Buysse, 1994), which measures training needs and skills/knowledge across five competency areas: child development, classroom environment, curriculum and learning, professionalism, and children with special needs (refer to question 8 for a description of the child care sample). In general, child care providers rated

themselves highest in the areas of arrangement of child care environments and professionalism; they rated themselves lowest in the area of serving young children with special needs.

11. Have regulatable child care quality variables, in particular group size and staff:child ratios, improved over time?

No significant differences in group size and staff:child ratios have been seen over the past year, although ratios have improved somewhat. The average preschool class included 14.5 children in both 1994 and 1995; the mean staff:child ratio for preschool classrooms was 1:9.8 in 1994, compared to 1:9.4 in 1995. Using the partially completed dataset, we cannot conclude that these structural aspects of child care quality have significantly improved. Significant changes may not be revealed in only a year's time or perhaps are aspects of quality that require more intense efforts than were received in the first year of Smart Start implementation.

Information on ratios and group size was collected in the spring of 1994 from the Needs and Resources Assessment and compared to the recent data from the random sample of child care director interviews. (The Smart Start evaluation sample of child care centers was described in question 8 and the Needs and Resources Assessment sample was described in question 9.)

12. Have services to children in child care centers increased as a result of Smart Start?

This question is difficult to answer because no baseline data on the breadth or numbers of services to children are available. However, in the spring of 1995, child care centers known to be participating in Smart Start were more likely to offer children meals, speech and language screenings, developmental screenings, and dental screenings to children than other randomly selected centers. Information on the services offered by child care centers was obtained through director interviews (refer to question 8 for sampling and methods). We will annually monitor the number and kinds of services offered by child care centers.

FAMILY SUPPORT SERVICES

One of the goals of Smart Start is to ensure that families effectively fulfill their role as primary providers, nurturers, and teachers of their children. Local partnerships are supporting families by offering a variety of educational opportunities and services to them.

13. Are services for families increasing as a result of Smart Start?

Child Care Resource and Referral (CCR&R) services help families identify high quality child care that meets their individual family needs. In 1993 prior to Smart Start, 4 of the 12 pioneer counties/region offered CCR&R services; all Smart Start counties now offer CCR&R services. Every partnership funded (fully or partially) CCR&Rs during the 1994-95 fiscal year. Families in these counties have more help available as they search for appropriate child care arrangements.

Family Resource Centers (FRC) support families by offering multiple services, support, information, and referral in a centralized location. In 1993 prior to Smart Start, 3 of the pioneer counties/regions had FRCs; 10 now have FRCs and 1 more partnership is planning to establish an FRC. Eleven of the partnerships funded (fully or partially) FRCs during the 1994-95 fiscal year. Families in these counties have a source of childrearing help and support if they want it.

Information regarding families' use of and satisfaction with these services and child care, health care, and other community services is currently being obtained by the evaluation team through interviews with approximately 50 parents from each pioneer county/region who have participated in a Smart Start sponsored program. Data from these family interviews will be presented in a future report.

14. Are low-income families benefiting from Smart Start?

A portion of every pioneer Smart Start partnership's funds are allocated to the government child care subsidy system that provides financial assistance for child care to low-income families. Data on the proportion of subsidized children in centers participating in Smart Start and data on the child care subsidy waiting list suggest that low-income families who use child care are benefiting from Smart Start. Based on director interview data, child care centers that received Smart Start funds for subsidies tended to enroll a significantly greater proportion of children who receive government child care subsidies based on income eligibility, compared to centers that did not receive Smart Start subsidy funds.

The proportions of subsidized children in centers were obtained from director interviews. Across the 12 pioneer sites, 35% of the children enrolled in an average center received child care subsidies. The range of subsidized children in any particular center was wide, from none of the children to all. (Refer to question 8 for a description of the sample of child care centers.)

Additional information from the DCD subsidy database indicates that pioneer Smart Start counties *reduced* the number of children on the child care subsidy waiting list by 42% from 1993 to 1994, compared to a 36% *increase* of children on the waiting list in non pioneer Smart Start counties during the same time period. Of the total number of children removed from the subsidy waiting list across all 100 North Carolina counties from 1993 to 1994, the pioneer Smart Start counties account for 56% of the reduction (1905 out of 3397) whereas the addition of children to the subsidy waiting list in pioneer Smart Start counties accounts for only 5% of the total addition across all counties (252 out of 5111).

15. Are children with special needs and their families receiving Smart Start services?

In the first year of Smart Start, partnerships generally allocated less than 10% of their Smart Start dollars for activities specifically targeting children with special needs and their families. However, many of the other activities include children with special needs as part of a larger population of children and families to be served. This finding is not surprising, given the broad-based emphasis of the initiative on improving and expanding early childhood and family support services for *all* children and families.

Smart Start projects that *target* or *include* children with special needs and their families were identified by reviewing the local partnerships' first-year plans. *Targeted* activities focus exclusively on children with special needs. Activities that *include* children with special needs focus more broadly on all children and families but also explicitly mentioned children with special needs. We are currently repeating this analysis with partnerships' second-year plans.

HEALTH SERVICES

Because one primary outcome of Smart Start is to ensure that all children are healthy when they enter school, partnerships are implementing various strategies to improve the health of children, including special clinics and extended hours for immunizations and dental and developmental screenings, health consultants for child care programs, and mobile health vans. The diversity among partnerships in their health service initiatives is greater than in any other area.

16. Are Smart Start efforts improving children's health?

Because no single standardized measure of children's health status exists, health is measured through several different variables. Data regarding children's health are being collected by the evaluation team and will be monitored annually through state databases, Kindergarten Health Assessments (KHA), and family interviews. Baseline data have been gathered, but at least two more years of data collection will be needed to answer this question adequately. Health is one area in which statewide databases may be of use to the evaluation, specifically databases for Health Check (formerly Early Periodic Screening, Diagnosis and Treatment, or EPSDT) data; health provider data; child abuse and neglect reports; Special Supplemental Food Program for Women, Infants and Children (WIC) participation rates; provision of services for children with special health needs (CSHN); and vital statistics data. At this time, these statewide data are only available for 1992-93 and/or 1993-94. Each county's data are entered into the evaluation database to examine trends over time in these health variables in pioneer Smart Start counties compared to other counties.

Data on the health status of entering kindergartners are being collected from the Kindergarten Health Assessments. The evaluation team cooperated with the State Center for Health and Environmental Statistics in a pilot test of the KHA and used the pilot data to select elements of the KHA as potential indicators of change in children's health status. These data will be collected annually, monitoring trends over time.

The final source of health data is being obtained through interviews with parents of children birth through age 5. (Refer to question 13 for a description of the family interview.) Specific health information is being gathered on children's health status, utilization of health services for well child care and immunizations, injuries and illness, and use of referral services

for children with special health care needs, along with families' satisfaction with and barriers to obtaining services.

INNOVATIVE SERVICE DELIVERY AND SYSTEMS CHANGE

A fundamental tenet of Smart Start is that local problems are best solved by local initiatives. With this assumption, the State committed itself to distribute funding to local programs according to recommendations from local partnerships. Collaboration among agencies and programs is also part of the State's vision of systems change through Smart Start.

17. Has the State's original intention of local autonomy been achieved?

According to interviews with Smart Start participants and observations by Smart Start evaluation team members, the State has reined in the degree of local autonomy originally intended for Smart Start counties. Approval mechanisms with DHR and state budgetary deadlines forced partnerships to adopt more traditional approaches that did not necessarily match their ideals for service innovations. Certain state-wide standards became implemented in process and forced structural aspects to Smart Start initiatives that contradicted the premise of individual, local design. Also by implementing categorical standards and quotas, DHR restricted local partnerships' leeway in designing new systems to serve families and children. In short, although local partnerships intended to re-structure local services from the bottom up, they have encountered significant obstacles directed from the top down.

18. Are community agencies and programs working more collaboratively?

One of the goals of Smart Start is the effective coordination of services for young children and their families, which requires agencies, both public and non-profit, to understand each other better and to collaborate on the planning and delivery of services. The existing parts of a system of service must be transformed into an integrated service system targeted at meeting the needs of young children and their families. Through questionnaires and interviews, a Network Analysis is being performed for each Smart Start county/region to determine the extent of community service providers' awareness of other agencies providing services to families with children birth through 5 years, the degree of influence exercised by agencies, patterns of interaction between and among agencies, and patterns of referrals to and from agencies participating in Smart Start. Baseline data on these characteristics have been collected this year and will be compared to data in future years to determine subsequent changes in collaboration.

SUMMARY

The long-term outcomes of Smart Start cannot yet be assessed, although some preliminary conclusions can be drawn about Smart Start's implementation in the 12 pioneer partnerships. The challenge of bringing together an interdisciplinary team to craft local solutions to local problems has been met in some respects. Team functioning improved over the first year, thanks in part to the County Collaboration meetings, the work of the coaches, and the enormous personal effort of local Smart Start participants. The promise of local autonomy has not been achieved, however. Teams report being constrained by ever-increasing rules and procedures required by the State (at both agency and legislative levels).

Several child and family services are more available now than before Smart Start: the number of child care resource and referral agencies and the number of family resource centers have increased dramatically. The proportion of AA-licensed centers in Smart Start counties has increased substantially. More children from poor or working-poor families are enrolled in child care through the subsidy program, and the subsidy waiting lists for child care have been reduced considerably. Teachers in child care centers that have been more involved with Smart Start efforts are more frequently working to improve their education through T.E.A.C.H. and are more likely to be offering higher quality programs. Staff:child ratios in infant classrooms are also better in centers participating in Smart Start.

The findings mentioned above are some of the measurable, interim effects of Smart Start one year into implementation. The data supporting these findings, along with other data regarding early childhood education and care, children's health, family support, and service systems change, need to be collected and monitored annually to determine significant changes. The long-term questions of Smart Start's effectiveness for children and families will be answered in future reports.

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